

The Stream Line

On Kentucky's State Revolving Fund (SRF) Program

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Community Spotlight: South Shore

By Bill Averell

Sewer System Rehabilitation and Capacity Upgrade for Wastewater Treatment Plant

The City of South Shore in Greenup County has been approved for a \$3 million-plus low-cost loan through the Clean Water State Revolving Fund to make improvements to its sewer system that will reduce wastewater overflows, improve collection lines and save money through energy-saving technologies.

The loan, which is administered through the Kentucky Infrastructure Authority and Kentucky Division of Water, will allow the municipality to address several wastewater treatment issues in its sanitary sewer collection system and reduce infiltration and inflow (I/I) into its .390 million-gallon-per-day wastewater treatment plant (WWTP).

In addition to the \$2 million WWTP treatment capacity upgrade and \$1.006 million sewer system

upgrade, the city has applied for an additional \$1 million Community Development Block Grant (CDBG) to supplement the sewer rehab project.

South Shore's WWTP and lift stations are frequently overloaded during moderate-to-heavy rain events, resulting in discharge of raw water sewage into residential and commercial areas and, subsequently, the Ohio River. Despite improvements made to the city's three major lift stations under a CDBG project completed in October 2011, the system was still operating beyond its maximum design capacity during heavy or prolonged periods of rain. Furthermore, a 1999 sewer system evaluation had identified areas in the collection system that needed slip-line replacement, cleaning and clearing.

Rehabilitation of the sewer system will include conducting closed-circuit television evaluations, performing light cleaning and clearing of lines and recording the condition of all sizes of collector lines up to 40,000 linear feet of sewer. The project will also include repairs to or replacement of the slip-lining of

Meet Our New Employee

My name is Amber Vaughn and I have recently joined the SRF & SPAP Section within the Water Infrastructure Branch. I am replacing Alison Simpson and will be taking over many of her job duties. Although I know it will take some time, I hope to be as knowledgeable and helpful as she was. Please be patient and understanding with me as I learn all there is to learn about the program.

I look forward to assisting water and wastewater systems during the loans and grants process! Although much of the information I have been given is new to me, I do come from a background within the Kentucky Division of Water.

Before joining the SRF & SPAP Section, I worked directly with water systems and operators throughout our state in the Compliance and Technical Assistance Section for over four years. I enjoyed being connected to nearly 500 water systems in Kentucky, but also look forward to being able to assist those same systems with ways to improve, expand, and update their infrastructures. Please let me know if I can help with any questions you might have and I will do my best to answer them, or at least find someone who can! Thank you and I look forward to talking with you.

Amber Vaughn, Internal Policy Analyst II
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18,958 linear feet of dilapidated 8-inch lines located along several streets within the city limits.

The WWTP capacity treatment project features the addition of a 1.0 MG equalization basin (EQB) to stabilize flow into the plant's treatment system. The EQB is a free-standing structure located at the beginning of the treatment chain that catches I/I during heavy flow events and releases the flow into the WWTP as flows return to normal. The EQB will be equipped with variable-speed influent pumps to stabilize (or equalize) the flow into the WWTP for more efficient operation and treatment.

The remainder of the WWTP improvement project includes

- Installation of a new supervisory control and data acquisition (SCADA) system and variable frequency drives on several pumps
- Provision of phosphorus (biological) removal
- Replacement of several telescoping valves
- Installation of a new comminutor (grinder), new flow meters, a new line grinder and new recycling- activated and waste-activated sludge pumps
- Installation of dissolved oxygen meters
- Construction of a maintenance building

In addition to improving the lives of approximately 709 customers (2,607 people) in South Shore, the project will save money for the city and its customers as it incorporates energy-reducing technologies. Because lower flow equates to lower power costs, there are estimates of annual savings of \$9,410 in power costs alone. The WWTP upgrades employ improved technologies and practices to reduce energy consumption, use energy in a more efficient way and produce/use renewable energy.

The city is investing \$30,000 of its SRF project funding toward the installation of SCADA systems and \$175,000 of the loan amount for the VFD controllers as a means of demonstrating our commitment to wiser use of energy and resources. The SCADA will allow it to monitor the entire treatment plant while the VFDs will provide greater energy efficiency in the pump station and elsewhere.



Engineer's Corner

During the 2008 reorganization of DOW, the Facilities Construction Branch and the Drinking Water Branch were incorporated into a new branch named the Water Infrastructure Branch. Under this new branch, the review engineers who had been part of the two former branches were consolidated into the newly formed Engineering Section.

The Engineering Section reviews plans for all new and upgraded water distribution lines, water pump stations, water storage tanks, wastewater collection lines, wastewater pump stations, and treatment plant modifications and upgrades. Plans should be sent to:

Engineering Section
Water Infrastructure Branch
Division of Water
200 Fair Oaks Lane
Frankfort, KY 40601

** Please note, do not send plans or correspondence to 14 Reilly Road. Unfortunately, we are still receiving mail at this old address; make sure and use the new address above.*

Engineering Section staff:

Supervisor

Mark Rasche, P.E.

Administrative Assistants

Kanaka Aspari
Lissa Doss

Review Engineers

Daniel Kulik
Mohammed "Mohi" Mohiuddin
Abbas Pourghasemi
Fred Sarabi
William Wright
Mortaza Tabayeh



News You Can Use

SRF Binding Commitments, March 2012 to June 2012

March 2012

Fund F (Drinking Water)

- Campbellsville-\$1,875,000
- Centertown-\$922,850
- Sturgis-\$3,000,000

Fund A (Clean Water)

- Ashland-\$4,500,000
- Murray-\$46,000,000
- Grant County Sanitary SD-\$913,000
- Lexington-Fayette Urban County Government-\$1,930,000
- Regional Water Resource Agency-\$357,335
- Regional Water Resource Agency-\$1,586,875

April 2012

Fund A (Clean Water)

- Flemingsburg-\$500,000
- Jackson-\$700,000
- Russell Springs-\$719,000
- South Shore-\$3,006,000
- Worthington-\$500,000

May 2012

Fund A (Clean Water)

- Flatwoods-\$400,000
- Grayson-\$785,000
- Oak Grove-\$1,000,000
- Russell-\$970,000

June 2012

Fund F (Drinking Water)

- Hartford-\$564,150

Fund A (Clean Water)

- Earlington-\$825,000
- Lawrenceburg-\$2,000,000
- Perry County Sanitation District-\$875,000

Update on ARRA Funds Expended and Remaining

The American Recover and Reinvestment Act (ARRA) of 2009 allotted \$66.7 million to Kentucky for wastewater infrastructure and drinking water projects.

Kentucky Clean Water State Revolving Fund received approximately \$47.8 million while Kentucky's Drinking Water State Revolving Fund received approximately \$18.9 million.

To date, Kentucky has paid out \$42,316,301 in clean water ARRA project expenditures, with \$5,566,675 in project funds still under construction. There were 44 clean water ARRA projects, and 37 of those are now closed with all construction work and ARRA required documentation completed.

Kentucky has paid out \$18,483,038 in drinking water ARRA project expenditures, with \$433,212 still under construction. There were 17 drinking water ARRA projects, and 13 of those are now closed with all construction work and ARRA required documentation completed.

If you have an ARRA project that has not yet closed, please note that EPA is requesting that all ARRA projects be completed and all funds expended by Sept. 30, 2012.

The Stream Line

Commonwealth of Kentucky
Steven L. Beshear, *Governor*

**Energy and Environment
Cabinet**

Leonard K. Peters, *Secretary*

**Department for
Environmental Protection**

Bruce Scott,
Commissioner

Division of Water

Sandy Gruzesky, *Director*

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